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A WINTER STUDY GROUP ON READING.

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A STUDY GROUP ON READING WAS HELD AT INDIANA UNIVERSITY, BLOOMINGTON, INDIANA, FROM JANUARY 21 THROUGH JANUARY 26, 1963. THE PURPOSE OF THIS MEETING OF LEADING SCHOLARS, DRAWN CHIEFLY FROM THE FIELDS OF PSYCHOLOGY AND LINGUISTICS, WAS (1) TO EXPLORE THE STRENGTHS AND WEAKNESSES OF EXISTING THEORIES AND RESEARCH ON READING, (2) TO DISCUSS ITS TEACHING IN UNITED STATES ELEMENTARY SCHOOLS, AND (3) TO SUGGEST DIRECTIONS FOR FUTURE RESEARCH AND DEVELOPMENT. SEVEN MAJOR STATEMENTS ABOUT THE TEACHING OF READING GREW OUT OF THESE 6 DAYS OF DISCUSSION. RESEARCH PROJECTS WERE RECOMMENDED FOR EACH OF THE STATEMENTS. (LP)

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A STUDY GROUP ON READING

REPORT ON COOPERATIVE RESEARCH PROJECT G-008

Title: A WINTER STUDY GROUP ON READING

Investigator: Chairman: Charles A. Ferguson, Director
Center for Applied Linguistics
Washington, D.C.

Participants: Nineteen selected scholars in psychology and linguistics

Institution: Indiana University Foundation
Indiana University
Bloomington, Indiana

Project Number: G-008

Duration: January 21 through January 26, 1963

BACKGROUND

Following a recommendation of the Panel on Educational Research and Development, a joint advisory group to the President's Science Advisor, the U. S. Commissioner of Education, and the Director of the National Science Foundation, a Winter Study Group on Reading was held at Indiana University, Bloomington, Indiana, from January 21 through January 26, 1963. The purpose of this meeting of leading scholars, drawn chiefly from the fields of psychology and linguistics, was to explore and discuss the strengths and weaknesses of the existing theories and research on reading and its teaching in the elementary schools of the United States and to suggest directions for future research and development. The recommendations of this Winter Study Group were designed to serve as guidelines for the U. S. Office of Education and the Panel on Educational Research and Development.

OBJECTIVES

The Winter Study Group was designed to give impetus to research and development in the field of elementary reading instruction by

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formulating research and development procedures which take into account factors of the kind just described, and which exploit new ideas contributed by the participants. The recommendations of the Study Group are not to be thought of as guidelines for writing books and materials, but as guidelines which can serve as the basis for specific research and development proposals.

Attention was centered on three basic problems:

a. the nature of language and its implications for learning to read, factors which are insufficiently understood by many scholars who have done research on reading,

b. the problem of teaching reading to children who regularly use dialects which include substandard forms and children who hear a foreign language in the home, and

c. any evidence of need to reconsider the age-old question of the chronological age at which children can profitably be taught to read.

PROCEDURE

The Winter Study Group on Reading met at Indiana University, Bloomington, Indiana from January 21 through January 26, 1963. Nineteen invited participants were in attendance for all or most of the period. Workpapers were submitted in advance by certain of the participants and all received a preliminary paper, "A Checklist of Questions for Discussion" prepared by John B. Carroll. Opening remarks on the following topics were presented by selected participants:

The Teaching of Reading and the State of Research
Linguistics and Reading
Psychology and Reading

The Pre-School Child's Control of Language
Language Background Problems: Regional and Class Dialects and Foreign Language
The Process of Reading and Learning to Read
Some Proposed Developmental Projects
New Lines of Research and Specific Research Projects
Ways and Means

Extensive and free discussion followed the remarks on each topic, all pointed toward needed research and development in the field of reading.

CONCLUSIONS AND IMPLICATIONS

Seven major statements about the teaching of reading grew out of the six days of discussion. These are listed in the final report. They pertain to the following:

1. The place and function of the teaching of sound-symbol correspondence in the early stages of learning to read.
2. The concensus of the group that present "basal" reading systems give insufficient attention to these relationships and that none teach these relationships in a thoroughly satisfactory manner.
3. The structure of English and the problems of dialect are too little known by teachers of reading and that they learn little about them in their pre-service and in-service training.
4. Cooperative ventures, especially continuing programs, which include reading specialists, teachers, psychologists, and linguists, can bring significant improvement in the teaching of reading at various levels and in various aspects, and can also provide stimulation for theoretical advances in the fields of linguistic analysis and the psychology of learning.

Seven major areas for cooperative research were listed together with suggestions for extensive field testing of newly developed programs designed to improve the teaching of reading. These suggestions by individual participants are spelled out at length in the report.

BIBLIOGRAPHY

An annotated reading list on linguistics for teachers of reading contains 21 references. A bibliography on the teaching of reading for linguistics includes 9 references.

FINAL REPORT ON COOPERATIVE RESEARCH PROJECT #G-008
A WINTER STUDY GROUP ON READING
SUBMITTED--JUNE 30, 1965

Following a recommendation of the Panel on Educational Research and Development, a joint advisory group to the President's Science Advisor, the U. S. Commissioner of Education, and the Director of the National Science Foundation, a Winter Study Group on Reading was held at Indiana University, Bloomington, Indiana, from January 21 through January 26, 1963. The purpose of this meeting of leading scholars, drawn chiefly from the fields of psychology and linguistics, was to explore and discuss the strengths and weaknesses of the existing theories and research on reading and its teaching in the elementary schools of the United States and to suggest directions for future research and development. The recommendations of this Winter Study Group were designed to serve as guidelines for the U. S. Office of Education and the Panel on Educational Research and Development.

The Purpose and Plan of the Study Group

1. <u>The Problem</u>

Under pressure from many sources, nearly all established subject matter fields in the American elementary and secondary school curriculum are coming under increasingly close scrutiny. One important area is the teaching of reading in the elementary schools. There is a growing awareness that new breakthroughs in this field must come from ever more carefully formulated and controlled research, followed by materials development based directly on the results of such research.

Early in 1962 a Panel on Educational Research and Development was formed, as a joint advisory group to the President's Science Advisor, the U. S. Commissioner of Education, and the Director of the National Science Foundation. Its function was to act upon the major conclusions of an earlier special meeting on education which created the panel: (1) that in many fields considerable research and development work on curriculum improvement is highly desirable; (2) that the pattern which has developed in mathematics, the sciences, and, more recently, English, of using Federal support to make good curriculum materials available to the schools could appropriately be applied to other subject matter fields at various educational levels. The Study Group was designed to give attention to reading as one of the problem areas.

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2. Related Research

A. Insufficient understanding of the nature of language and its implications for learning to read. For example:

1. Insufficiently detailed understanding of the relationships between language as sound and language as marks on paper.

2. Insufficient understanding of the equipment and deficiencies the child brings to the problem of becoming literate:

a. his oral control of grammar and vocabulary, both probably grossly underestimated

b. his regional dialect

c. his class dialect

d. the special problems of the learner with the kinds of neurological deficiency now known as dyslexia.

B. Haphazard programming - Merely as an example, consider the kind of research which presumes to test the relative effectiveness of two orders of presentation, putting phonics first--the study of letters in the function of representing sounds--and then recognition of whole words and longer units, or vice versa. In evaluating such research, one may find that the precise acts the learner i is to perform as an end result of either order of presentation have not been clearly defined. Even more important, one usually finds that the material to be learned at any point has not, through prior research and experimentation, been broken down into optimal learning steps, nor have effective procedures for presenting the material been devised and tested. This is especially true of experimentation involving phonics. Under these circumstances, any evaluation of the effedtiveness of either order of instruction is likely to be inconclusive, or to be valid only for the exact material and procedures used in the experiment.

3. Objectives

The Winter Study Group was designed to give impetus to research and development in the field of elementary reading instruction by formulating research and development procedures which take into account factors of the kind just described, and which exploit new ideas contributed by the participants. The recommendations of the Study Group are not to be thought of as guidelines for

writing books and materials, but as guidelines which can serve as the basis for specific research and development proposals.

Attention was centered on three basic problems:

a. the nature of language and its implications for learning to read, factors which are insufficiently understood by many scholars who have done research on reading,

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c. any evidence of need to reconsider the age-old question of the chronological age at which children can profitably be taught to read.

4. Procedure

The Winter Study Group on Reading met at Indiana University, Bloomington, Indiana from January 21 through January 26, 1963. Nineteen invited participants were in attendance for all or most of the period. Work-papers were submitted in advance by certain of the participants and all received a preliminary paper, "A Checklist of Questions for Disscussion" prepared by John B. Carroll. Opening remarks on the following topics were presented by selected participants:

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The Process of Reading and Learning to Read
Some Proposed Developmental Projects
New Lines of Research and Specific Research Projects
Ways and Means

Extensive and free discussion followed the remarks on each topic, all pointed toward needed research and development in the field of reading.

5. Study Group Personnel

Starred names are steering committee members:

PARTICIPANTS

*John B. Carroll (psychology)
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George Suci (psychology)
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Harvard Graduate School of Education
Harvard University
Cambridge, Mass.

Several observers from Indiana University and other institutions and organizations attended for brief periods.

Seven Statements About the Teaching of Reading

These statements are in the nature of generalizations which grew out of the discussions of the participants.

1. A fundamental part of the beginning stage in learning to read English is the acquisition of associations between the sounds of the language and the letters and spelling patterns used to represent them. Consequently, one component of any effective program of reading instruction should be a body of material which is based on a systematic analysis of the important correspondence.

2. The acquisition of sound-symbol associations is only one of the early steps in learning to read, and full advantage should be taken of insights from psychology and linguistics in the development of programs leading to the ultimate goal--the ability to read with adequate speed and comprehension.

3. The current "basal readers" which constitute the core of most reading instruction in the United States do not treat the establishment of sound-symbol associations systematically enough and do not pay sufficient attention to the presentation of grammatical patterns. They reflect a serious underestimate of the amount of English which the child has already mastered in his ordinary spoken language. No series of readers or set of supplementary materials currently available is fully satisfactory in these respects.

4. It is not clear from existing evidence at how early an age children can profitably begin to learn to read, or to what point in elementary education instruction in reading should continue as a separate part of the curriculum. New research to answer these questions should be undertaken, especially with the use of better instructional materials and techniques.

5. Instruction in linguistics, emphasizing such relevant matters as the nature and functioning of language as well as the structure of English and its sound-symbol correspondences and dialects, should be a part of the education of elementary teachers and of programs of in-service training for them. Support must be found for the preparation of textbooks for this, training grants for teachers, setting up of special institutes, and the training of specialists in linguistics and reading.

6. When the ordinary spoken language of the students is a variety of English highly divergent from widely accepted standard varieties or when it is a language other than English, this constitutes a special teaching problem which requires special materials and techniques and special training for teachers.

7. Cooperative ventures, especially continuing programs, which include reading specialists, teachers, psychologists, and linguists, can bring significant improvement in the teaching of reading at various levels and in various aspects, and can also provide stimulation for theoretical advances in the fields of linguistic analysis and the psychology of learning.

Recommended Research Projects

The discussion of the Winter Study Group produced seven statements about the teaching of reading. Most of these statements affirm or imply the need for research of various kinds, which should be given special encouragement by interested funding agencies and organizations. Of the various specific research projects discussed by the Winter Study Group, some were merely named or sketched, others outlined in more detail. The research recommendations of the group are presented below, grouped under the particular "statement" to which eadh recommendation appears most relevant. The recommendations assume vigorous support by the Winter Study Group for a project entitled, "An Experimental Program to Improve the Teaching of English in the Elementary Schools," jointly proposed by the Modern Language Association and the National Council of Teachers of English and currently under consideration by the U. S. Office of Education.

1. A fundamental part of the beginning stage in learning to read English is the acquisition of associations between the sounds of the language and the letters and spelling patterns used to represent them. Consequently, one component of any effective program of reading instruction should be a body of material which is based on a systematic analysis of the important correspondences.

This statement implies that "systematic analysis of the important correspondences" already exist. Existing analysis by linguists are still rare, and while no doubt "systematic" enough, are by no means exhaustive. Exhaustive analysis will necessarily involve computer processing of large amounts of data. Special attention should be given to the development of a workable concept of regularity, to the problems posed by different directions of correspondence (i.e. phoneme-grapheme, grapheme-phoneme) and to the role of diaphones, morphophonemes, and stylistic variation, in determining the form of statement of grapheme-phoneme correspondences best suited to the development of reading materials based on them.

Other related research suggestions are as follows:

Wick R. Miller proposed an experiment designed to demonstrate when the alphabetic principle "pays off".

Two lists are constructed, somewhat as follows:

List A	List B	Gloss
$k^{ae}{}_t$	ae_t ae	cat
$b^{ae}{}_t$	btow	bat
bowt	tbk	boat
$t^{ae}{}_b$	$b^{ae}{}_t$	tab
etc.	etc.	etc.

The actual materials used would be isomorphic with those shown above, e.g. circles and squares, Greek or Devanagari letters, or the like. Preschool children are presented with either list A or list B; they are to learn the appropriate glosses. The symbols of List A are in one-to-one correspondence with the phonemic system; those of List B are intended to be unrelated to it. The same symbols occur in both lists, with the same frequency. Tight controls and details of design are left to the psychologist. List A, expanded to, say, 100 items, should be learned faster than List B.

Raven I. McDavid, Jr. proposed an examination of the consistency and effectiveness with which grapheme-phoneme correspondences are presented in a representative number of basal readers.

2. The acquisition of sound-symbol associations is only one of the early steps in learning to read, and full advantage should be taken of insights from psychology and linguistics in the development of programs leading to the ultimate goal -- the ability to read with adequate speed and comprehension.

Related recommended research:

Wallace Lambert proposed a survey of the verbal behavior of age 5 to 6 year old children, which should determine what the actual language facilities are of children about to learn to read. Through the use of psychological and linguistic procedures, samples of the actual social vocabulary, common grammatical structures, and verbal associations of first grade aged children would be examined. The scope of this project should be carefully correlated with the Strickland study of the language of elementary school children, and with a contemplated joint MLA-NCTE proposal.

Harry Levin suggested that an advanced graduate student in linguistics work with a first grade teacher to produce a detailed log of: materials, method and sequencing of materials, children's reactions, kinds of errors, individual differences, and impressions concerning achievement.

He proposed, further, an investigation of the influence of grading on language. Although it is recognized that the child's command of language is related to his success in reading, the converse may also be true, and is certainly obvious with respect to vocabulary learning. Other aspects of language, such as active control of certain grammatical structures, may well be influenced by reading. Before-after reading studies were suggested, as well as more detailed studies requiring carefully controlled materials.

Wallace Lambert proposed a comparative socio-psychological study of avid readers and non-readers. One should examine students at ages 5, 6 and older, who find enjoyment from required and hobby reading, and compare samples of such students with control sub-groups following or having followed the same instructional methods in learning to read and possessing similar intellectual capacities, including those who read before school at age 5. Attention should be given to their social adjustments, their personality makeups, their attitudinal and aspirational orientation, the home environment, especially with respect to parental encouragement to read, and the way in which parents act or fail to act as models. The study could utilize interview and questionnaire techniques which investigate the children's recollections and feelings about early reading experiences.

Wick R. Miller agreed that the child already controls and responds to a good deal of the grammar of English by the time he enters school. But much is still to be learned, particularly forms and constructions peculiar to writing, which may then have an effect on what is spoken, especially in elevated or learned styles (cf. Levin above). English contains groups of words characterized by stress shifts which condition morphophonemic vowel changes, e.g. analyze, analysis, analytic. Suffixation, without stress shift, is often associated with similar vowel changes, e.g. tone, tonic, omen, omenous, etc. When and how is this morphology learned? Is it learned in whole or in part through reading? What implications do these morphophonemic relationships have for learning spelling patterns?

Priscilla Tyler suggested:

a. A study of the grammatical structures of written literate English - a continuation of Fries' work as found in his American English Grammar.

b. A study of the characteristics of oral reading styles, as distinct from spoken English produced without a written stimulus.

3. The current "basal readers" which constitute the core of most reading instruction in the United States do not treat the establishment of sound-symbol associations systematically enough and do not pay sufficient attention to the presentation of grammatical patterns. They reflect a serious underestimate of the amount of English which the child has already mastered in his ordinary spoken language. No series of readers or set of supplementary materials currently available is fully satisfactory in these respects.

Documentation of this statement is suggested for grapheme-phoneme correspondences in McDavid's research proposal above. For grammar, sufficient documentation is offered by Ruth G. Strickland, The Language of Elementary School Children, Indiana University, 1962 (U. S. Office of Education, Cooperative Research Project #561).

4. It is not clear from existing evidence at how early an age children can profitably begin to learn to read or to what point in elementary education instruction in reading should continue as a separate part of the curriculum. New research to answer these questions should be undertaken, especially with the use of better instructional materials and techriques.

The continuation of recent work in early langugage development may eventually throw light on the problem of when to begin reading instruction. Linguists and psychologists are just beginning to study the development of various linguistic levels, viewed as systems in themselves at a given point in time, rather than as an approximation to adult language. Multiple replication of the studies of Miller, Ervin, Braine and others, combined with insights from work in concept formation and motor skill development, may eventually produce a diachronic psycholinguistics of considerable import for reading instruction in general.

The study group viewed films presenting the work of O. K. Moore with three-year-olds using electric typewriters. It did not produce specific research recommendations in this area. Discussions of the role, design, and cost of suitable hardware were inhibited by the unavoidable absence of Mr. Peter Goldmark, who was to have been the chief contributor in this field.

Related to the question of the point to which reading instruction should continue as a separate part of the curriculum was a longitudinal study of reading suggested by Wick R. Miller and Ulrich Neisser and presented in some detail. The central notion is to find out how much of what kind of material has to be presented before various habits develop, and how the unit of decoding expands beyond the word into larger stretches of print. The suggested study would require following

kindergarten or first grade children up through, say, the third or fourth grade. Concomitantly, psychological laboratory studies should aim at clarifying the cognitive processes involved in reading, which are certainly of various kinds and various levels. The developmental study itself would try to focus upon these cognitive processes as they appear and mature in children who are learning to read. The relative difficulty of different grammatical constructions and sentence types must also be determined. These and other research projects might eventually make it possible to incorporate other language skills, e.g. spelling, and high-speed reading, into early reading development.

The purpose and design of all such projects should be carefully correlated with work recently completed or presently in progress, such as the Loban project at the University of California at Berkeley (cf. Walter Loban: The Language of Elementary School Children, a report now available from the National Council of Teachers of English, 508 South Sixth Street, Champaign, Illinois).

5. Instruction in linguistics, emphasizing such relevant matters as the nature and functioning of language as well as the structure of English and its sound-symbol correspondences and dialects, should be a part of the education of elementary teachers and of programs of in service training for them. Support must be found for the preparation of textbooks for this, training grants for teachers, setting up of special institutes, and the training of specialists in linguistics and reading.

In this connection, Ulrich Neisser called attention to the general need for qualified linguists, the demand for whom clearly exceeds the supply. He suggested that government and foundation support for the education and training of linguists should be on an appropriate scale.

Wallace Lambert suggested a fellowship program to train elementary reading teachers in language and linguistics. Outstanding reading teachers could be offered the opportunity to spend a year of full-time study at institutions offering successful programs in applied linguistics.

6. When the ordinary spoken language of the students is a variety of English highly divergent from widely accepted standard varieties or when it is a language other than English, this constitutes a special teaching problem which requires special materials and techniques and special training for teachers.

Ulrich Neisser called attention to a central problem affecting every consideration of minority-group language learning. The manner in which children of linguistic-minority groups should be taught English depends, fundamentally, on our national goals with respect to these groups. Do we hope to assimilate or to preserve their distinctive culture? Such a

decision obviously lies beyond the scope of the present meeting, but might fittingly be the subject of a special conference.

Pauline Rojas suggested a general effort to define "criterion behavior" in reading. This would require the collection and categorization of an exhaustive set of test items and performance tasks which could serve as a reservoir for use in test construction, classroom exercises, and self-instructional programs. As part of this general effort, one or more linguists would examine representative standardized reading tests to determine what linguistic skills are really being tested by these instruments. In particular, items must be examined for "cultural loading" which would invalidate their use by learners whose native language is not English.

Raven I. McDavid, Jr. outlined a literacy program for a minority group which speaks a divergent dialect. The socio-economic implications of large-scale internal migration of a repressed minority from a culturally-deprived region have been widely discussed. The results observable on the educational scene are: (1) inadequate command of "consensus English" of any variety; (2) slow academic advancement and high dropout rate; (3) impairment of educational standards, up to the college level. Basic research must therefore include a large scale investigation of the difference between the minority and the consensus communication system or systems, including paralanguage ("tone of voice" aspects) and patterned facial and body motion (kinesics). A testing project must determine which of these differences create the greatest amount of interference in communication, and which differences create other social and educational problems. Materials must be developed to eliminate these kinds of interference. One approach would involve deliberate teaching of the local variety of consensus language, including necessary drills, in the nursery school and kindergarten programs, with reading instruction following. Another would teach reading simultaneously with audio-lingual exposure to the local standard. Pilot demonstrations would be directed toward simultaneous upgrading of the reading skills of the parents.

7. Cooperative ventures, especially continuing programs, which include reading specialists, teachers, psychologists, and linguists can bring significant improvement in the teaching of reading at various levels and in various aspects, and can also provide stimulation for theoretical advances in the fields of linguistic analysis and the psychology of learning.

Inherent in this statement is an endorsement of the MLA-NCTE project already mentioned, and of interdisciplinary summer and year-round research and development projects intended to investigate psychological processes, to gather and classify further relevant linguistic data, and to develop suitable teaching materials.

John B. Carroll proposed a field testing project, broadly applicable to all projects and programs which produce materials for the teaching of reading. All such programs will eventually require field testing and comparison with each other and with more traditional instructional materials and methods. Such a field testing project must find ways of assuring that its results are not prematurely associated with vindication or rejection of alleged "linguistic" or "psychological" methods.

With these reservations, it is proposed that a commission be appointed to examine newly developed programs, and to select several of them for extensive field testing, under careful supervision and with adequate controls and testing procedures. Field tests would involve such steps as the following:

1. complete preparation of the necessary materials, where such materials are lacking, such as teachers' manuals, tests, workbooks, and the like;

2. training of teachers in the use of all materials;

3. introducion of each selected program into a minimum of 100 first grade classrooms, chosen from various school districts;

4. complete pre-testing of all children involved, on intelligence, reading readiness (precisely defined), and other diagnostic dimensions;

5. careful periodic testing and observation of achievement;

6. collection of collateral data, such as information on outside reading, teaching of reading at home, etc;

7. strict observation of classes to assure that given combinations of methods and materials are actually being compared, rather than labels on the doors of the classrooms.

Selected and Annotated Linguistics Reading List for Teachers of Reading*

1942 Leonard Bloomfield, "Linguistics and Reading," The Elementary English Review XIX, April-May, 1942, 125-130, 183-186. Reprinted in Language Learning, Vol. 5, 1955, 94-107, and as Chapter IV of Bloomfield and Barnhart, Let's Read, A Linguistic Approach (see 1961 below).

1952 John B. Carroll, The Study of Language, Cambridge, Mass., Harvard University Press, 1952. Chapter II, The Science of Linguistics, and especially Chapter VI, Language and Education.
A leading scholar trained in both psychology and linguistics presents in Chapter VI a sober evaluation of the role of linguistics in reading instruction.

1956 John Lotz, "Linguistics: Symbols Make Men," in Frontiers of Knowledge, L. White, Jr., ed. New York, Harper & Brothers, 1956, pp. 207-31. Reprinted in Psycholinguistics, Sol Saporta, ed., New York, Holt-Rinehart-Winston, 1961, pp. 1-15.
The nature, function and description of language. Technical terms are carefully and clearly defined.

Paul Roberts, Teacher's Guide to Patterns of English, New York, Harcourt Brace & Company, 1956.
A textbook for English courses, based upon a modern linguistic analysis of English grammar, without elaborate theoretical or technical apparatus.

1958 Jean Berko, "The Child's Learning of English Morphology," Word, Vol. 14, 1958, pp. 150-177. Reprinted in Psycholinguistics, op. cit., pp. 359-375.
A good example of how a psychologist with linguistic training studies language development in the child.

Roger Brown, Words and Things, Glencoe, Illinois, The Free Press. 1958, Chapter II, pp. 57-80.
In this chapter, called the History of Writing and a Dispute about Reading, a leading psychologist who has studied linguistics extensively reviews disputes about reading and makes some recommendations which further research may confirm or modify.

W. Nelson Francis, The Structure of American English, New York, Ronald Press, 1958. Chapter I, Language and Linguistics, and Chapter VIII, Writing it Down: Graphics.
Fairly technical, with lots of detail. Chapter IX, "The Dialects of American English," by R. I. McDavid, Jr., is an excellent introduction to dialect geography.

*This list includes a number of items which offer perspectives from both linguistics and psychology.

*Prepared by Alfred S. Hayes, Head, Research and Special Projects, Center for Applied Linguistics of the Modern Language Association of America.

1960 Arthur J. Bronstein, The Pronunciation of American English, New York, Appleton-Century-Crofts, Inc., 1960.
Part One, Our Language Today, explains how spoken language is analyzed, and how regional dialects of English differ.

John B. Carroll, "Language Development in Children," Encyclopedia of Educational Research, New York, The MacMillan Company, 1960, pp. 744-752. Reprinted in Psycholinguistics, op. cit., pp. 331-342.
A good summary to 1960.

1961 Leonard Bloomfield and Clarence Barnhart, Let's Read, A Linguistic Approach, Detroit, Wayne State University Press, 1961.
This book offers the views and suggested instructional materials of an eminent linguist, written more than twenty years ago (1937-42). See the important review by Henry Lee Smith, Jr., 1963 below.

H. A. Gleason, Jr., An Introduction to Descriptive Linguistics, New York, Holt-Rinehart-Winston, Revised edition 1961. Chapters I, XXV, XXVI.
A widely used introductory textbook on linguistics. The chapters indicated (Language, Writing Systems, Written Languages) are basic to an understanding of the relationships between language, speech and writing.

1962 Eleanor J. Gibson, et al. "The Role of Grapheme-Phoneme Correspondence in the Perception of Words." American Journal of Psychology, Vol. LXXV, December, 1962, pp. 554-570.
A clearly described experiment demonstrates the relevance of spelling-sound correspondence to reading.

Ruth G. Strickland, The Language of Elementary School Children, Indiana University, 1962 (USOE Cooperative Research Project #561).
A ground-breaking study. Modern techniques of analysis are used to describe the grammatical constructions actually used by children when they talk, as a basis for comparison with those used in basal readers.

1963 Emmett Albert Betts, "Linguistics: Reading," Education, May, 1963.
A reading specialist reviews contributions of linguistics.

Morton W. Bloomfield and Leonard Newmark, A Linguistic Introduction to the History of English, Alfred A. Knopf, New York, 1963, Chapters I and II, pp. 3-19, 26-35.
These chapters present in non-technical language many of the assumptions about language on which linguists base their practical recommendations.

John B. Carroll, "The Analysis of Reading Instruction: Perspectives from Psychology and Linguistics." Chapter XV, 1963 Yearbook of the National Society for the Study of Education.

More technical than Carroll 1952, this article is very important, reflecting recent developments in linguistics and psychology.

Susan M. Ervin, Wick R. Miller, "Language Development," Yearbook, National Society for the Study of Education, 1963.

An important article with an extensive bibliography.

W. Nelson Francis, Language, Speech, and Writing. A Workpaper prepared for the Winter Study Group on Reading, Indiana University, January 1963. Available from the Center for Applied Linguistics, 1755 Massachusetts Avenue, N. W., Washington, D. C. 20036.

Offers theoretical models of the reading process.

Charles Carpenter Fries, Linguistics and Reading, New York, Holt-Rinehart-Winston, 1963.

Highlights are: a brief account of the history of reading instruction and of linguistic science, a linguistically-based description of the reading process, and the author's view of its methodological implications.

Henry Lee Smith, Jr., "Review of Bloomfield-Barnhart, Let's Read, A Linguistic Approach," Language, Vol. 39, January-March, 1963.

A thoughtful review by a well-known linguist, with many updating comments.

What is a Scientific Linguist? Linguistic Reporter, February, 1963.

A compact statement of what a linguist is and does.

An Annotated Bibliography for Linguists on the Teaching of Reading*

Research on Current Practices

Austin, Mary C., The Torch Lighters: Tomorrow's Teachers of Reading. Cambridge, Mass.: Harvard University Press, 1961.
The Harvard-Carnegie Reading Study had two major purposes: To learn how the colleges and universities in the United States are now preparing tomorrow's teachers of reading and to suggest recommendations for improving that preparation.

Austin, Mary C., and Morrison, Coleman, The First R: The Harvard Report on Reading in Elementary Schools. New York: The Macmillan Company, 1963.
This study, which was financed by the Carnegie Corporation, was a questionnaire and interview survey of the instructional methods and techniques in use in the elementary schools of cities and counties in the United States with populations over 10,000.

DeBoer, John J., and Dallman, Martha, The Teaching of Reading. New York: Holt, Rinehart and Winston, Inc., 1960, 1964.
The authors present the reading program as it relates to child development with emphasis on progressive cultivation of reading abilities. Space is given to the program in action at various grade levels.

Hunnicutt, C. W., and Iverson, William J., Research in the Three R's. New York: Harper Brothers, 1958.
This is a collection of articles presenting research in reading and its application to the teaching of reading in the schools.

Lee, Dorris M., and Allen, R. V., Learning to Read Through Experience. New York: Appleton-Century Crofts, 1963.
Here is an approach to reading which takes the child from the known oral language to the unknown written language with emphasis on what writing is and how it operates. Children learn to compose, to read and to write in one interrelated program.

Lefevre, Carl A., Linguistics and the Teaching of Reading. New York: McGraw-Hill Book Company, 1964.
The application of linguistics to the teaching of reading represented here is one which needs classroom application under research conditions but may prove valuable from the point of view of both linguists and teachers.

*Prepared by Robert B. Ruddell, Assistant to the Conference Director, Indiana University.

Russell, David H., Children Learn to Read. Boston: Ginn and Company, 1961.

This is a scholarly presentation of reading from three points of view. The first constitutes the sociological, historical, child-development and psychological backgrounds of the reading process. The second encompasses an overview of the methodology of the reading program from kindergarten through junior high school. The third area involves a discussion of and methodology related to the various developmental phases of the reading program. Supporting research and writing is presented in relation to the specific topics considered.

Smith, Nila Banton, Reading Instruction for Today's Children. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963.

Miss Smith is the outstanding authority on the historical development of the teaching of reading in the schools of the United States. She gives attention to a variety of new approaches to reading as well as a detailed analysis of current methods.

Umans, Shelley, New Trends in Reading Instruction. New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Umans presents a variety of methods of developing reading skills first grade through high school as they are found in public school systems that are concentrating on the improvement of the teaching of reading.